

WHAT IS CLAIMED IS:

1. A compressor assembly comprising:
 - a housing defining an interior plenum, a lower portion of said plenum defining an oil sump;
 - a compressor mechanism disposed within said housing;
 - a motor disposed within said housing;
 - a shaft having a first end and an opposite second end, said first end operably coupled to said compressor mechanism, said shaft extending through said motor and operably coupled thereto, said second end extending outwardly from said motor, said shaft defining a rotational axis having a substantially horizontal orientation; and
 - a bearing support secured within said housing, said bearing support including a radially inner shaft support member, a radially outer support member, and plurality of support arms extending between said inner and outer support members, said outer support member having a radially outer surface, a substantial portion of said radially outer surface engaged with said housing, said radially outer surface and said housing defining a first gap therebetween proximate a lowermost portion of said outer support member and wherein said lowermost portion extends freely through an arc of at least approximately 120 degrees between lowermost adjacent ones of said plurality of support arms.
2. The compressor assembly of claim 1 wherein said interior plenum defines a low pressure chamber and a high pressure chamber, said motor, said shaft, said oil sump and said bearing support all disposed in said low pressure chamber.
3. The compressor assembly of claim 1 wherein said compressor mechanism comprises a fixed scroll member secured within said housing and an orbiting scroll member secured within said housing, said orbiting scroll member engaged with said fixed scroll member and operably coupled to said first end of said shaft.
4. The compressor assembly of claim 1 wherein said radially outer surface of said outer support member and said housing define a second gap disposed vertically above said oil sump.
5. The compressor assembly of claim 1 wherein said plurality of support arms define a plurality of angles between adjacent pairs of said support arms, said plurality of angles comprising at least two angles having different magnitudes.
6. A compressor assembly comprising:

a housing defining an interior plenum, said plenum having a low pressure chamber and a discharge pressure chamber, a portion of said low pressure chamber defining an oil sump;

a compressor mechanism disposed within said housing;

a motor disposed within said housing;

a shaft having a first end and an opposite second end, said first end operably coupled to said compressor mechanism, said shaft extending through said motor and operably coupled thereto, said second end extending outwardly from said motor, said shaft defining a rotational axis having a substantially horizontal orientation; and

a bearing support secured within said housing, said bearing support including a radially inner shaft support member, a radially outer support member, and plurality of support arms extending between said inner and outer support members, said outer support member having a radially outer surface, a substantial portion of said radially outer surface engaged with said housing, said radially outer surface and said housing defining a first gap therebetween proximate a lowermost portion of said outer support member and wherein said lowermost portion is positioned within said oil sump.

7. The compressor assembly of claim 6 wherein said lowermost portion of said bearing support extends freely through an arc of at least approximately 120 degrees between lowermost adjacent ones of said plurality of support arms.

8. The compressor assembly of claim 6 wherein said bearing support, said motor and said shaft are all disposed in said low pressure chamber.

9. The compressor assembly of claim 6 wherein said compressor mechanism comprises a fixed scroll member secured within said housing and an orbiting scroll member secured within said housing, said orbiting scroll member engaged with said fixed scroll member and operably coupled to said first end of said shaft.

10. The compressor assembly of claim 6 wherein said radially outer surface of said outer support member and said housing define a second gap disposed vertically above said oil sump.

11. A compressor assembly comprising:

a housing including a substantially cylindrical section and defining an interior plenum, said plenum having a low pressure chamber and a discharge pressure chamber, a lower portion of said plenum defining an oil sump;

a compressor mechanism disposed within said housing;

a motor disposed within said housing;

a shaft having a first end and an opposite second end, said first end operably coupled to said compressor mechanism, said shaft extending through said motor and operably coupled thereto, said second end extending outwardly from said motor, said shaft defining a rotational axis having a substantially horizontal orientation; and

a bearing support secured within said substantially cylindrical section of said housing, said bearing support including a radially inner shaft support member, a substantially circular radially outer support member, and plurality of support arms extending between said inner and outer support members, said outer support member having a radially outer surface, a substantial portion of said radially outer surface engaged with said housing, said radially outer surface and said housing defining a first gap therebetween proximate a lowermost portion of said outer support member and wherein said lowermost portion extends freely through an arc of at least approximately 120 degrees between lowermost adjacent ones of said plurality of support arms, said lowermost portion being positioned within said oil sump.

12. The compressor assembly of claim 11 wherein said bearing support, said motor and said shaft are all disposed in said low pressure chamber.

13. The compressor assembly of claim 11 wherein said compressor mechanism comprises a fixed scroll member secured within said housing and an orbiting scroll member secured within said housing, said orbiting scroll member engaged with said fixed scroll member and operably coupled to said first end of said shaft.

14. The compressor assembly of claim 11 wherein said radially outer surface of said outer support member and said housing define a second gap disposed vertically above said oil sump.